

What is claimed is:

1. A structured foam pig intended to be passed through an inside of a pipeline in order to facilitate scraping of the inside of said pipeline when propelled by a liquid flowing inside of said pipeline, comprising:

an elongated and substantially cylindrical polymer foam body including a plurality of channels that extend at right angles to a longitudinal axis of said cylindrical body, said channels being equally spaced around said cylindrical body and being coiled around said cylindrical body, and

two ends, each end including a bullet-nosed surface connected with said cylindrical body and a conical surface provided from said bullet-shaped surface, each of said channels of said cylindrical body beginning close to one of the two ends and ending close to the other end of the two ends; and

a plurality of elastomeric cleaning structural elements located inside said cylindrical body, each of said plurality of elastomeric cleaning structural elements including a cylindrical central structural element and scraping extensions coiled around the cylindrical structural element, said plurality of elastomeric cleaning structural elements not interconnected to one another.

2. The structured foam pig of claim 1, wherein said channels have a spiral pitch shape and are located at positions on said cylindrical body such that said channels combine to cover at least the entire inner circumference of said pipeline.

3. The structured foam pig of claim 1, wherein said central structural element is located in a core of said cylindrical body.

4. The structured foam pig of claim 1, wherein each of said scraping extensions are located inside said channels.
5. The structured foam pig of claim 1, wherein each of said scraping extensions are capable of bending in the same direction relative to a longitudinal axis of the scraping extensions when said pig travels within said pipeline.
6. The structured foam pig of claim 1, wherein a number of said scraping extensions of said cleaning structural elements is the same as a number of said channels of said cylindrical body.
7. The structured foam pig of claim 1, wherein said scraping extensions are provided with a same angle (α) between each of said scraping extensions and an adjacent scraping extension, wherein said angle is with respect to a circumference of the cylindrical central structural element.
8. The structured foam pig of claim 1, wherein each of said scraping extensions are provided at a same angle (β) relative to the longitudinal axis of said cylindrical body so that shorter longitudinal sides of said extensions are positioned at right angles to lengths of said spiral channels.
9. The structured foam pig of claim 1, wherein travel of the pig through curved pipes with short radius bends and pipelines with varying diameters is facilitated by the fact that said cleaning structural elements are not interconnected.

10. The structured foam pig of claim 1, wherein said pig is manufactured by setting and aligning said cleaning structural elements inside a mold, and then injecting polymer foam into the mold.

11. The structured foam pig of claim 1, wherein said polymer foam is polyurethane foam.

12. The structured foam pig of claim 1, wherein said elastomeric material is elastomer polyurethane.